

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:

Namik Yilmaz

Serial No.: 10/597,338

Filed: July 20, 2006

For: High-Frequency Heating Device

Technology Center: 3700

Group Art Unit: 3742

Examiner: Quang T. Van

Appeal No.

APPELLANT'S BRIEF

This is an appeal from the final rejection of the Examiner dated May 10, 2010 rejecting Claims 1-3. The requisite fee set forth in 37 CFR §41.20(b)(2) is filed herewith.

TABLE OF CONTENTS

REAL PARTY IN INTEREST (37 C.F.R. 41.37(C)(1)(I))	4
RELATED APPEALS AND INTERFERENCES (37 C.F.R. 41.37(C)(1)(II))	5
STATUS OF CLAIMS (37 C.F.R. 41.37(C)(1)(III))	6
STATUS OF AMENDMENTS (37 C.F.R. 41.37(C)(1)(IV))	7
SUMMARY OF CLAIMED SUBJECT MATTER (37 C.F.R. 41.37(C)(1)(V))	8
GROUND OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. 41.37(C)(1)(VI))	9
ARGUMENT (37 C.F.R. 41.37(C)(1)(VII))	10
REJECTIONS UNDER 35 U.S.C. §103(A)	10
1. <i>Applicant's Claims Are Not Rendered Obvious Under 35 U.S.C. §103 Over Any Of The Prior Art Patents.</i>	10
A. Claims 1-3 rejected over Maehara in view of Nilssen.....	11
1. Claim 1.....	11
2. Claim 2.....	12
3. Claim 3.....	12
CLAIMS APPENDIX (37 C.F.R. 41.37(C)(1)(VIII))	14
EVIDENCE APPENDIX (37 C.F.R. 41.37(C)(1)(IX))	15
RELATED PROCEEDINGS APPENDIX (37 C.F.R. 41.37(C)(1)(X))	16

TABLE OF AUTHORITIES

Cases

<i>Graham v. John Deere Co.</i> , 383 U.S. 1 (1966).....	10
<i>In re Fine</i> , 837 F.2d 1071 (Fed. Cir. 1988).....	10
<i>In re Johnson</i> , 589 F.2d 1070 (CCPA 1978).....	12
<i>In re Kahn</i> , 441 F.3d 977 (Fed. Cir. 2006)	10
<i>In re Oetiker</i> , 977 F.2d 1443 (Fed. Cir. 1992).....	10
<i>KSR Int’l Co. v. Teleflex</i> , 550 U.S. 398 (2007).....	10, 11

Statutes

35 U.S.C. §103(a).....	10, 11
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REAL PARTY IN INTEREST (37 C.F.R. 41.37(c)(1)(i))

Arcelik Anonim Sirketi a Turkish Joint Stock Company is the real party in interest.

RELATED APPEALS AND INTERFERENCES (37 C.F.R. 41.37(c)(1)(ii))

There are no related appeals or interferences.

STATUS OF CLAIMS (37 C.F.R. 41.37(c)(1)(iii))

The current status of the claims is as follows:

Allowed claims – none

Objected claims – none

Rejected claims – 1-3

Claims 1-3 are involved in this appeal.

STATUS OF AMENDMENTS (37 C.F.R. 41.37(c)(1)(iv))

After final, Applicant did not amend any currently pending claims.

SUMMARY OF CLAIMED SUBJECT MATTER (37 C.F.R. 41.37(c)(1)(v))

As set forth in Claim 1, the present invention resides in a high-frequency heating device (Spec., ¶ [010], line 1) comprising: a magnetron (Spec., ¶ [010], line 2) generating microwave energy (Spec., ¶ [010], line 2); a filament circuit (Spec., ¶ [010], line 2); and an inverter (Spec., ¶ [010], line 4) comprising a wave multiplexer (Spec., ¶ [011], line 8) coupled to a resonant circuit (Spec., ¶ [011], line 7) which ensures that the magnetron is powered by high-frequency rectified voltage (Spec., ¶ [011], lines 9-10) obtained from a network coupled to the resonant circuit (Spec., ¶ [010], line 3), and wherein voltage obtained from the high-frequency current coming from the resonant circuit is multiplied by being raised and rectified (Spec., ¶ [011], lines 9-10) and wherein the inverter which includes a low-pass filter placed between the wave multiplexer and the ground (Spec., ¶ [011], lines 10-11), providing that low-frequency noise is eliminated from the current without decreasing the voltage and that the current applied to the magnetron is smoothed (Spec., ¶ [011], lines 11-13) (additional support for Claim 1 is found in the claim as originally filed).

As set forth in Claim 2, the high-frequency heating device according to claim 1 wherein the current applied to the magnetron has a sinusoidal form (Spec., ¶ [012] and ¶ [014]) (additional support for Claim 2 is found in the claim as originally filed).

As set forth in Claim 3, the high-frequency heating device according to claim 1 wherein the current applied to the magnetron has been changed from a square-wave form to a sinusoidal form. (Spec., ¶ [012] and ¶ [014]) (additional support for Claim 3 is found in the claim as originally filed).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL
(37 C.F.R. 41.37(c)(1)(vi))

- Whether claims 1-3 are unpatentable under 35 U.S.C. §103(a) over U.S. Pat. No. 5,091,617 issued to Machara et al. (“*Maehara*”) in view of U.S. Pat. No. 4,956,581 issued to Nilssen et al. (“*Nilssen*”).

ARGUMENT (37 C.F.R. 41.37(c)(1)(vii))

REJECTIONS UNDER 35 U.S.C. §103(a)

1. *Applicant's Claims Are Not Rendered Obvious Under 35 U.S.C. §103 Over Any Of The Prior Art Patents*

The Examiner has failed to establish a prima facie case of obviousness. When examining a patent application, the Examiner has the initial burden of factually supporting a prima facie conclusion of obviousness. *See, In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Additionally, when rejecting claims under 35 U.S.C. §103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See, In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). Specifically, the Examiner must (1) determine the scope and content of the prior art; (2) determine the differences between the prior art and the claims at issue; and (3) determine the level of ordinary skill in the art. *See, Id.* In addition to these factual determinations, the Examiner must also provide “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). Moreover, the analysis supporting obviousness should be made explicit and should “identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements” in the manner claimed. *See, KSR Int'l Co. v. Teleflex*, 550 U.S. 398, 418 (2007).

Only if the Examiner makes a prima facie case of obviousness, does the burden shift to the Applicant for providing evidence of non-obviousness. *See, In re Oetiker*, 977 F.2d at 1445. Obviousness is then determined based on the evidence as a whole and the persuasiveness of the arguments. *See, Id.* Here, the Applicants respectfully assert that the Examiner has failed to meet the evidentiary burden.

Additionally, the cited prior art differs from the Applicant's claims. Therefore, a person of ordinary skill in the art at the time of the invention would not have looked to the prior art cited by the Examiner to create Applicant's claims. As such, the Applicant respectfully requests that the Examiner reconsider his claims.

A. Claims 1-3 rejected over *Maehara* in view of *Nilssen*

1. Claim 1

With respect to Claim 1, the Examiner has indicated on page 2 of the Final Office action that “[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize in *Maehara* a low-pass filter connecting with the ground in order to reduce noise from the feeding circuit.” (Final Office Action, p. 2). The Applicant respectfully asserts that the Examiner provided no rationale to support a legal conclusion of obviousness with this statement. Additionally, the Examiner has impermissibly used hindsight to find Applicant’s invention obvious under 35 U.S.C. §103(a) and has used the Applicant’s claims as a roadmap for formulating the obviousness rejection. The Supreme Court has stated that the fact finder should be aware of the distortion caused by hindsight bias and must be cautious of arguments that rely upon ex post reasoning. *See, KSR Int’l Co.*, 550 U.S. at 421. Moreover, the elements disclosed in *Maehara* and *Nilssen* differ from the Applicant’s claims and cannot be combined to create Applicant’s invention.

Specifically, the Examiner’s reasoning to combine *Maehara* and *Nilssen* to render Applicant’s invention obvious is unclear. The conclusory, one sentence statement of the Examiner regarding the combination of *Maehara* and *Nilssen* does not provide the Applicant with an understanding of why a person of ordinary skill in the art would combine the inventions to create Applicant’s invention. Further, the Examiner indicates on page 4 of the final office action that “there is no requirement that a motivation to make the modification be expressly articulated.” (Final Office Action, p. 4). The Applicant respectfully disagrees with this assertion. The Supreme Court in *KSR Int’l Co. v. Teleflex* specifically states that the analysis supporting obviousness should be made explicit and should “identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements” in the manner claimed. *See, KSR Int’l Co. v. Teleflex*, 550 U.S. 398, 418 (2007). Moreover, the Federal Circuit has explicitly indicated that the Examiner must also provide “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). In the current proceeding, the Examiner has not made any articulated reasoning nor has he identified a reason that would have cause the Applicant to combine *Maehara* and *Nilssen*. In order to make a prima facie case of obviousness, the Examiner is *required* to specifically state some reason for the elements of the prior art to be combined. Here, there is no such reasoning.

Additionally, *Maehara* does not disclose Applicant's claim 1 and explicitly teaches away from the information cited therein as it listed this information as "prior art," and *Maehara* discloses its invention to solve these "problems" that lead away from using a low pass filter. Therefore, *Maehara* does not disclose Applicant's claim 1 and, in fact, teaches away therefrom.

Moreover, it would not have been obvious to one of ordinary skill at the time of the invention because Applicant would not look to combine *Maehara* with *Nilssen* to create his invention because *Nilssen* does not describe a high-frequency heating where current is smoothed without decreasing the voltage. This is not taught in *Nilssen* and it appears that both the current and voltage in *Nilssen* would be decreased. In fact, *Nilssen* is directed to an invention of the "crest-factor" of the current supplied to the magnetron. Therefore, it would not have been obvious of the Applicant to look to *Maehara* as combined with *Nilssen* to create the invention.

2. Claim 2

With respect to Claim 2, the Examiner has not specifically indicated in the Final Office Action why *Maehara* and *Nilssen* would be combined to create Applicant's claim 2. Therefore, the Examiner has not made a prima facie case of obviousness as required by the law. Moreover, as discussed above, a person of ordinary skill in the art would not combine *Maehara* and *Nilssen* to create Applicant's invention.

Further, because Claim 2 is a dependent claim that adds further limitations to independent Claim 1, it should be allowed in dependent form because independent Claim 1 is not rendered obvious by *Maehara* in view of *Nilssen*. See, *In re Johnson*, 589 F.2d 1070, 1080 (CCPA 1978). As such, *Maehara* in view of *Nilssen* does not render Applicant's Claim 2 obvious under 35 U.S.C. §103. Applicant respectfully requests reconsideration of his claim.

3. Claim 3

Regarding Claim 3, the Examiner has not specifically indicated in the Final Office Action why *Maehara* and *Nilssen* would be combined to create Applicant's claim 3. Therefore, the Examiner has not made a prima facie case of obviousness as required by the law. Moreover, as discussed above, a person of ordinary skill in the art would not combine *Maehara* and *Nilssen* to create Applicant's invention.

Further, because Claim 3 is a dependent claim that adds further limitations to independent Claim 1, it should be allowed in dependent form because independent Claim 1 is not rendered obvious by *Maehara* in view of *Nilssen*. See, *In re Johnson*, 589 F.2d 1070, 1080 (CCPA 1978). As such, *Maehara* in view of *Nilssen* does not render Applicant's Claim 3 obvious under 35 U.S.C. §103. Applicant respectfully requests reconsideration of his claim.

CLAIMS APPENDIX (37 C.F.R. 41.37(c)(1)(viii))

1. A high-frequency heating device comprising:
a magnetron generating microwave energy,
a filament circuit, and
an inverter comprising a wave multiplexer coupled to a resonant circuit which ensures that the magnetron is powered by high-frequency rectified voltage obtained from a network coupled to the resonant circuit and, wherein voltage obtained from the high-frequency current coming from the resonant circuit is multiplied by being raised and rectified, and
wherein the inverter which includes a low-pass filter placed between the wave multiplexer and the ground, providing that low-frequency noise is eliminated from the current without decreasing the voltage and that the current applied to the magnetron is smoothed.
2. The high-frequency heating device according to claim 1 wherein the current applied to magnetron has a sinusoidal form.
3. The high-frequency heating device according to claim 1 wherein the current applied to magnetron has been changed from a square-wave form to a sinusoidal form.

EVIDENCE APPENDIX (37 C.F.R. 41.37(c)(1)(ix))

The evidence appended hereto was first entered by the Examiner on page 3 of the first office action dated August 14, 2009. The evidence includes U.S. Pat. No. 5,091,617 issued to *Maehara et al.* and U.S. Pat. No. 4,956,581 issued to *Nilssen et al.*

RELATED PROCEEDINGS APPENDIX (37 C.F.R. 41.37(c)(1)(x))

None

Respectfully submitted,

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